Please amend the application as follows:

In the Claims

Please cancel Claims 6-7, 13, 31, 33-34, 41, 47, 52, 54, 56-58, 64, 66-69, 72, 75, 77-79, 81-83, 89, 92-94, 97, 100, 102-104, and 106.

Please amend Claims 5, 8-12, 14-18, 32, 35-40, 42, 44-46, 48, 51, 53, 55, 59-63, 65, 70, 73, 76, 80, 84-88, 90-91, 95-96, 98, 101, and 105.

5. (Amended) A method for magnetic induction time-multiplexed two-way short-range wireless communications, comprising:

during a first period of time, generating from a first unit with a first unit transducer system a first inductive field and receiving the first inductive field at a second unit with a second unit transducer system, the first transducer system including multiple transducers; and

during a second period of time, generating from the second unit with the second unit transducer system a second inductive field and receiving the second inductive field at the first unit with the first transducer system, the second transducer system including at least one transducer, at least one transducer of the first or second transducer systems functioning as a transmitter and a receiver of an inductive field.

8. (Amended) A method as in claim 9 further comprising:

positioning each of the multiple transducers in the first unit to be uniquely oriented with respect to each other.

9. (Amended) A method for communicating information over wireless links, the method comprising:

generating a varying magnetic field from a first unit during a first time slot to transmit information over a wireless link, the first unit including multiple transducers, at

least one of which functions as both a transmitter and receiver of a varying magnetic field;

generating a varying magnetic field from a second unit during a second time slot to transmit information over the wireless link;

transmitting information from the second unit to the first unit; and

selecting a transducer of the first unit to generate a varying magnetic field depending on which of the multiple transducers in the first unit receives a strongest signal from the second unit.

10. (Amended) A method as in claim 9 further comprising:

disposing a single transducer in the second unit for receiving information from the first unit and transmitting information from the second unit over the single transducer to the first unit.

11. (Amended) A method as in claim 9 further comprising:

selecting a carrier frequency for transmitting information over the wireless link to avoid interference.

12. (Amended) A method as in claim 9, wherein the first unit and second units are portable transceiver devices.

14. (Amended) A method as in claim 9 further comprising:

transmitting termination bits at the end of a time slot.

15. (Amended) A method as in claim 9 further comprising:

compressing the information for transmission during a time slot.

16 (Amended) A method as in claim 9 further comprising:

modulating the information onto a carrier frequency for transmission during a time slot.

17. (Amended) A method as in claim 9 further comprising:

encrypting the information for transmission during a time slot.

18. (Amended) A method as in claim 9, wherein the first unit transmits to the second unit during the first time slot and the second unit transmits to the first unit during the second time slot.

32. (Amended) A method as in claim 35, wherein the synchronization information is a header including multiple bit.

35. (Amended) A method for communicating information over a wireless link, the method comprising:

from a first unit including multiple transducers uniquely oriented with respect to each other and at least one of which functioning as both a transmitter and receiver of a varying magnetic field, generating a varying magnetic field to transmit synchronization information and data information over the wireless link;

at a second unit, receiving the varying magnetic field and using the synchronization information to synchronize the second unit to receive the data information over the wireless link;

transmitting a signal from the second unit, and

selecting a transducer of the first unit to generate a varying magnetic field depending on which of the multiple transducers receives a strongest signal from the second unit.

36. (Amended) A method as in claim 35 further comprising:

disposing a single transducer in the second unit for receiving information from the first unit and transmitting information from the single transducer in the second unit to the first unit.

37. (Amended) A method as in claim 35, wherein the wireless link between the first unit and second unit supports two-way full duplex communication.

38. (Amended) A method as in claim 35, wherein the first unit transmits information over one of three transducers and the second unit transmits and receives over a single transducer.

39. (Amended) A method as in claim 35, wherein the second unit is disposed in a headset including a speaker and microphone, and the first unit is disposed in a cellular telephone device

40. (Amended) A method as in claim 35, wherein an orientation of the first unit and second unit changes over time.

42. (Amended) A method as in claim 35, wherein the first unit is a portable transceiver device.

44. (Amended) A method as in claim 35, wherein the first unit is coupled to a communications network and the wireless link is part of a logical connection between the second unit and the communications network.

45. (Amended) A method as in claim 35 further comprising:

transmitting a signal from the second unit; and

detecting which of multiple transducers disposed in the first unit produces a strongest received signal from the second unit; and

generating a varying magnetic field in a time slot from the first unit on a transducer device oriented on similar axes as the transducer that produces the strongest received signal.

46. (Amended) A method as in claim 35 further comprising:

at the second unit, receiving data information from the first unit following receipt of the synchronization information.

48. (Amended) A method as in claim 35 further comprising:

utilizing a portion of the time slot to transmit synchronization information from the first unit to the second unit.

51. (Amended) A method as in claim 35 further comprising:

tracking movements of the first unit relative to the second unit for maintaining communication over the wireless link.

53. (Amended) A method as in claim 35 further comprising:

compressing the information for transmission over the wireless link in a time slot.

55. (Amended) A method as in claim 35 further comprising:

processing data information received in a previous time slot while transmitting in a reverse direction in a following time slot.

59. (Amended) A system as in claim 60, wherein the at least two transducers in the first unit are uniquely oriented with respect to each other.

60. (Amended) A system for communicating information over wireless links, the system comprising:

a first unit including at least two transducers to transmit and receive and at least one of said at least two transducers functioning as both a transmitter and receiver of a varying magnetic field, the first unit generating a varying magnetic field during a first time slot to transmit information; and

a second unit including at least one transducer to transmit and receive, the second unit receiving the varying magnetic field during the first time slot to receive the information transmitted by the first unit, the second unit transmitting information to the

first unit during a second time slot not overlapping with the first time slot, a transducer of the first unit generating a varying magnetic field depending on which of the at least two transducers receives a strongest signal from the second unit.

61 (Amended) A system as in claim 60, wherein a single transducer is disposed in the second unit for receiving information from the first unit and transmitting information to the first unit.

62. (Amended) A system as in claim 60, wherein the wireless link between the first unit and second unit supports two-way full duplex communication.

63. (Amended) A system as in claim 60, wherein the first unit transmits information over one of three uniquely oriented transducers and the second unit transmits and receives over a single transducer.

65. (Amended) A system as in claim 60, wherein an orientation of the first unit and second unit changes over time due to motion of a user.

70. (Amended) A system as in claim 60 further comprising:

a first circuit to detect which of multiple transducers disposed in the first unit produces a strongest received signal from the second unit; and

a second circuit to generate a varying magnetic field in a time slot from the first unit on a transducer device oriented on a similar axes as the transducer that produces the strongest received signal.

73. (Amended) A system as in claim 60, wherein a portion of the time slot is used to transmit synchronization information from the first unit to the second unit.

76. (Amended) A system as in claim 60, wherein movements of the first unit relative to the second unit are tracked for maintaining communication over the wireless link

80. (Amended) A system as in claim 60, wherein data information received in a previous time slot is processed while other data information is transmitted in a reverse direction in a following time slot.

84. (Amended) A system as in claim 85, wherein the at least two transducers in the first unit are uniquely oriented with respect to each other.

85. (Amended) A system for communicating information over a wireless link, the system comprising:

a first unit including at least two transducers to transmit and receive and at least one of said at least two transducers functioning as both a transmitter and receiver of a varying magnetic field, the first unit generating a varying magnetic field to transmit synchronization information and data information over the wireless link; and

a second unit including at least one transducer to transmit and receive, the first and second units being movable relative to each other, the second unit receiving the varying magnetic field and using the synchronization information to receive the data information over the wireless link, a transducer of the first unit generating a varying magnetic field depending on which of the at least two transducers receives a strongest signal from the second unit.

86. (Amended) A system as in claim 85, wherein a single transducer is disposed in the second unit for receiving information from the first unit and transmitting information to the first unit.

87. (Amended) A system as in claim 85, wherein the wireless link between the first unit and second unit supports two-way full duplex communication.

88. (Amended) A method as in claim 85, wherein the first unit transmits information over one of three uniquely oriented transducers and the second unit transmits and receives over a single transducer.

90. (Amended) A system as in claim 85, wherein an orientation of the first unit and second unit changes over time due to motion of a user.

91. (Amended) A system as in claim 85, wherein a carrier frequency is selected for transmitting information over the wireless link to avoid interference

95. (Amended) A system as in claim 85 further comprising:

a first circuit to detect which of multiple transducers disposed in the first unit produces a strongest received signal from the second unit; and

a second circuit to generate a varying magnetic field in a time slot from the first unit on a transducer device oriented on a similar axis as the transducer that produces the strongest received signal.

96. (Amended) A system as in claim 85, wherein the first unit detects which of multiple transducers receives a strongest signal in a previous time slot to transmit on the transducer in a following time slot.

98. (Amended) A system as in claim 85, wherein a portion of the time slot is used to transmit synchronization information from the first unit to the second unit.

101. (Amended) A system as in claim 85, wherein movements of the first unit relative to the second unit are tracked for maintaining communication over the wireless link.

105. (Amended) A system as in claim 85, wherein data information received in a previous time slot is processed while other data information is transmitted in a reverse direction in a following time slot.

Amendments to the claims are indicated in the attached "Marked Up Version of Amendments" (pages i – viii).

Please add new Claims 107- 158.

107. (New) The method as claimed in claim 5 further including selecting at least one of the multiple transducers of the first transducer system to generate or receive the first or second inductive fields, respectively.

108. (New) A method as in claim 5, wherein the first unit and second units are portable transceiver devices.

109. (New) A method for communicating information over wireless links, the method comprising:

generating a varying magnetic field from a first unit during a first time slot to transmit information over a wireless link;

generating a varying magnetic field from a second unit during a second time slot to transmit information over the wireless link; and

transmitting termination bits at the end of a time slot.

110. (New) A method for communicating information over wireless links, the method comprising:

generating a varying magnetic field from a first unit during a first time slot to transmit information over a wireless link;

generating a varying magnetic field from a second unit during a second time slot to transmit information over the wireless link;

transmitting information from the first unit to the second unit during the first time slot and transmitting

information from the second unit to the first unit during

the second time slot;

wherein an orientation of the first unit relative to the second unit changes over time.

111. (New) A method as in claim 110 further comprising:

transmitting information from the first unit to the second unit during the first time slot and transmitting information from the second unit to the first unit during the second time slot;

detecting which of multiple transducers disposed in the first unit produces a strongest received signal from the second unit; and

generating a varying magnetic field in a time slot from the first unit on a transducer device oriented on a similar axis as the transducer that produces the strongest received signal.

112. (New) A method as in claim 111 further including detecting which of the multiple transducers in the first unit receives a strongest signal in a previous time slot to transmit on that transducer in a following time slot.

113. (New) A method as in claim 110 further comprising:

utilizing a portion of the first time slot to transmit synchronization information from the first unit to the second unit.

114. (New) A method as in claim 113 further comprising:

synchronizing the second unit to receive during the first time slot based on received synchronization information from the first unit.

115 (New) A method as in claim 113 further comprising:

at the second unit, receiving data information from the first unit following receipt of the synchronization information.

116. (New) A method as in claim 110 further comprising:

at the first unit, processing data information received in a previous time slot while transmitting to the second unit in a following time slot

117. (New) A method as in claim 110 further comprising:

generating the magnetic field from the first unit in multiple unique orientations.

118. (New) A method for communicating information over wireless links, the method comprising:

generating a varying magnetic field from a first unit during a first time slot to transmit information over a wireless link;

generating a varying magnetic field from a second unit during a second time slot to transmit information over the wireless link; and

tracking movements of the first unit relative to the second unit for maintaining communication over the wireless link.

119. (New) A method as claimed in Claim 118, the method further comprising:

operating a transducer system in the first unit, the transducer system containing multiple uniquely oriented transducers.

120. (New) A method as claimed in Claim 119, the method further comprising:

detecting which of the multiple transducers disposed in the first unit produces a strongest received signal from the second unit.

121. (New) A method for communicating information over a wireless link, the method comprising.

from a first unit, generating a varying magnetic field to transmit synchronization information and data information over the wireless link and transmitting both types of information over one of the three transducers;

at a second unit, receiving the varying magnetic field at a single transducer used to transmit and receive and using the synchronization information to synchronize the second unit to receive the data information over the wireless link.

122. (New) A method for communicating information over a wireless link, the method comprising:

from a first unit, generating a varying magnetic field to transmit synchronization information and data information over the wireless link;

at a second unit, receiving the varying magnetic field and using the synchronization information to synchronize the second unit to receive the data information over the wireless link;

transmitting a signal from the second unit;

detecting which of multiple transducers disposed in the first unit produces a strongest received signal from the second unit; and

generating a varying magnetic field in a time slot from the first unit on a transducer device oriented on similar axes as the transducer that produces the strongest received signal.

123. (New) A method for communicating information over a wireless link, the method comprising:

from a first unit, generating a varying magnetic field to transmit synchronization information and data information over the wireless link;

at a second unit, receiving the varying magnetic field and using the synchronization information to synchronize the second unit to receive the data information over the wireless link;

tracking movements of the first unit relative to the second unit for maintaining communication over the wireless link.

124. (New) A method as claimed in Claim 123, the method further comprising operating a transducer system in the first unit, the transducer system containing multiple uniquely oriented transducers.

125. (New) A method as claimed in Claim 124, the method further comprising:

detecting which of the multiple transducers disposed in the first unit produces a strongest received signal from the second unit.

126. (New) A system for communicating information over wireless links, the system comprising:

a first unit including at least two uniquely oriented transducers to transmit and receive, the first unit generating a varying magnetic field during a first time slot to transmit information over one of the transducers; and

a second unit including at least one transducer to transmit and receive, the second unit receiving the varying magnetic field during the first time slot to receive the information transmitted by the first unit, the second unit transmitting information to the first unit during a second time slot not overlapping with the first time slot.

127. (New) A system for communicating information over wireless links, the system comprising:

a first unit, , including at least two transducers to transmit and receive, the first unit generating a varying magnetic field during a first time slot to transmit information; and

a second unit, changing orientation over time with respect to the first unit, including at least one transducer to transmit and receive, the second unit receiving the varying magnetic field during the first time slot to receive the information transmitted by the first unit, the second unit transmitting information to the first unit during a second time slot not overlapping with the first time slot.

128. (New) A system for communicating information over wireless links, the system comprising:

a first unit including at least two transducers to transmit and receive, the first unit generating a varying magnetic field during a first time slot to transmit information;

a second unit including at least one transducer to transmit and receive, the second unit receiving the varying magnetic field during the first time slot to receive the information transmitted by the first unit, the second unit transmitting information to the first unit during a second time slot not overlapping with the first time slot;

a first circuit to detect which of multiple transducers disposed in the first unit produces a strongest received signal from the second unit; and

a second circuit to generate a varying magnetic field in a time slot from the first unit on a transducer device oriented on a similar axis as the transducer that produces the strongest received signal.

129. (New) A system for communicating information over wireless links, the system comprising:

a first unit including at least two transducers to transmit and receive, the first unit generating a varying magnetic field during a first time slot to transmit information; and

a second unit including at least one transducer to transmit and receive, the second unit receiving the varying magnetic field during the first time slot to receive the information transmitted by the first unit, the second unit transmitting information to the first unit during a second time slot not overlapping with the first time slot; and

a tracking circuit coupled to the first or second units to track movements of the first unit relative to the second unit to maintain communication over the wireless link.

130. (New) A system for communicating information over wireless links, the system comprising:

a first unit including at least two transducers to transmit and receive, the first unit generating a varying magnetic field during a first time slot to transmit (i) information and (ii) termination bits at the end of the first time slot; and

a second unit including at least one transducer to transmit and receive, the second unit receiving the varying magnetic field during the first time slot to receive the

information and termination bits transmitted by the first unit, the second unit transmitting (i) information to the first unit during a second time slot not overlapping with the first time slot and (ii) termination bits at the end of the second time slot.

131. (New) A system for communicating information over a wireless link, the system comprising:

a first unit including at least three uniquely oriented transducers to transmit and receive, the first unit generating a varying magnetic field to transmit synchronization information and data information over one of the three transducers over the wireless link; and

a second unit including at least one transducer to transmit and receive, the first and second units being movable relative to each other, the second unit receiving the varying magnetic field and using the synchronization information to receive the data information over the wireless link.

132. (New) A system for communicating information over a wireless link, the system comprising:

a first unit including at least two transducers to transmit and receive, the first unit generating a varying magnetic field to transmit synchronization information and data information over the wireless link; and

a second unit, changing orientation over time with respect to the first unit due to motion of a user, including at least one transducer to transmit and receive, the first and second units being movable relative to each other, the second unit receiving the varying magnetic field and using the synchronization information to receive the data information over the wireless link.

133. (New) A system for communicating information over a wireless link, the system comprising:

a first unit including at least two transducers to transmit and receive, the first unit generating a varying magnetic field to transmit synchronization information and data information over the wireless link;

a second unit including at least one transducer to transmit and receive, the first and second units being movable relative to each other, the second unit receiving the varying magnetic field and using the synchronization information to receive the data information over the wireless link;

a first circuit to detect which of multiple transducers disposed in the first unit produces a strongest received signal from the second unit; and

a second circuit to generate a varying magnetic field in a time slot from the first unit on a transducer device oriented on a similar axis as the transducer that produces the strongest received signal.

134. (New) A system for communicating information over a wireless link, the system comprising:

a first unit including at least two transducers to transmit and receive, the first unit generating a varying magnetic field to transmit synchronization information and data information over the wireless link;

a second unit including at least one transducer to transmit and receive, the first and second units being movable relative to each other, the second unit receiving the varying magnetic field and using the synchronization information to receive the data information over the wireless link; and

a tracking circuit coupled to the first or second units to track movements of the first unit relative to the second unit to maintain communication over the wireless link.

135. (New) A system for communicating information over a wireless link, the system comprising:

a first unit including at least two transducers to transmit and receive, the first unit generating a varying magnetic field to transmit (i) synchronization information and data information over the wireless link and (ii) termination bits at the end of the first time slot; and

a second unit including at least one transducer to transmit and receive, the first and second units being movable relative to each other, the second unit receiving the

varying magnetic field and using the synchronization information to receive the data information and termination bits over the wireless link.

136. (New) A system for magnetic induction time-multiplexed two-way short-range wireless communications, the system comprising:

a first unit, with a first unit transducer system including multiple transducers generating during a first period of time a first inductive field and receiving a second inductive field during a second period of time,

a second unit, with a second unit transducer system including at least one transducer, the first unit receiving the first inductive field during the first period of time and generating the second inductive field during a second period of time;

at least one transducer of the first or second transducer systems functioning as a transmitter and a receiver of an inductive field.

137 (New) A system as in claim 130, wherein the first unit and second unit are portable transceiver devices.

138. (New) A system as in claim 136 wherein:

each of the multiple transducers in the first unit are positioned to be uniquely oriented with respect to each other.

139. (New) A system as in claim 136, wherein a single transducer is disposed in the second unit for receiving information from the first unit and transmitting information to the first unit.

140. (New) A system as in claim 136, wherein the wireless link between the first unit and second unit supports two-way full duplex communication.

141. (New) A system as in claim 136, wherein the first unit transmits information over one of three uniquely oriented transducers and the second unit transmits and receives over a single transducer.

142. (New) A system as in claim 136, wherein the second unit is disposed in a headset including a speaker and microphone, and the first unit is disposed in a wireless telephone device.

143. (New) A system as in claim 136, wherein an orientation of the first unit and second unit changes over time due to motion of a user

144 (New) A system as in claim 136, wherein a carrier frequency is selected for transmitting information over the wireless link to avoid interference.

145. (New) A system as in claim 136, wherein the first unit is a portable transceiver device.

146. (New) A system as in claim 136, wherein the second unit is a portable transceiver device.

147. (New) A system as in claim 136, wherein the first unit is coupled to a communications network and the wireless link between the second unit and first unit is part of a logical connection between the second unit and the communications network.

148. (New) A system as in claim 136 further comprising:

a first circuit to detect which of the multiple transducers disposed in the first unit produces a strongest received signal from the second unit; and

a second circuit to generate a varying magnetic field in a time slot from the first unit on a transducer device oriented on a similar axis as the transducer that produces the strongest received signal.

149. (New) A system as in claim 136, wherein the first unit detects which of the multiple transducers receives a strongest signal in a previous second period of time to select a transducer with which to transmit in a following first period of time.

150. (New) A system as in claim 136, wherein a portion of the first period oftime is used to transmit synchronization information from the first unit to the second unit.

151. (New) A system as in claim 150, wherein the second unit synchronizes to receive in the second period of time based on the received synchronization information.

152. (New) A system as in claim 150, wherein the second unit receives data information from the first unit following receipt of the synchronization information in the first period of time.

153. (New) A system as in claim 136, wherein movements of the first unit relative to the second unit are tracked for maintaining communication over the wireless link.

154. (New) A system as in claim 136,wherein termination bits are transmitted at the end of the first and second periods of time.

155. (New) A system as in claim 136, wherein the information is compressed for transmission over the wireless link in the first or second periods of time.

156 (New) A system as in claim 136, wherein information is modulated onto a carrier frequency for transmission from the first unit to the second unit.

157. (New) A system as in claim 136, wherein data information received in a previous period of time is processed while other data information is transmitted in a reverse direction in a following period of time.